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| EXAMINER |
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NIESZ, JASON KAROL

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02/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/543,123 | Applicant(s) NIEDZWIECHI ET AL. | |
| | Examiner JASON K. NIESZ | Art Unit 4147 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/16/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The information disclosure statement (IDS) submitted on 02/16/2006 is being considered by the examiner.
2. Claims 2-9 are objected to because of the following informalities: claim 1 claims a hydrogen fueling station whereas the subsequent dependent claims claim a transportable hydrogen fueling station of claim 1. The word transportable must be either added to claim 1 or removed from the dependent claims. Appropriate correction is required.
3. Claims 13-15 are objected to because of the following informalities: claim 11 claims a hydrogen fueling station whereas the subsequent dependent claims claim a transportable hydrogen fueling station of claim 11. The word transportable must be either added to claim 1 or removed from the dependent claims. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 4-8, 9, 10, 11, 12, 13, 14, 15, 20-22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barclay (US Patent 5,505,232) in view of Chen et al. (US Patent 6,946,112 B2) in further view of Teel (5,603,360).

6. In Re claims 1, 2, 9, 10, 11, 12 and 15 with reference to figure 1 Barclay discloses a feed line (12)(Column 2, lines 22-25), a compressor means (70)(Column 3, lines 62-67) a storage tank (62)(Column 3, lines 51-53) control valves (24, 34, 44 and 101)(Column 2, lines 40-42) and multiple cooling means (26 and 36)(Column 2, lines 50-51). Furthermore a controller is inherent in the system as the gas from feed line 12 is sent selectively through lines 20, 30 or 40 depending on its state (Column 2, lines 25-30). Barclay doesn't disclose a reversible connector. Chen discloses a hydrogen reservoir comprising a reversible valve or connector for both ingress and egress of the hydrogen. (Column 10, lines 45-52). Furthermore, Barclay doesn't disclose the system as being portable. The Teel reference discloses another gas handling system that is mounted on a trailer enclosure for portability purposes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Barclay device by making valve 101 reversible, in order to make it possible to fill automotive tanks directly from the gas source in the event that the storage tank becomes empty. Furthermore, it would have been obvious to mount the entire system on a trailer enclosure in view of the teachings of the Teel reference to facilitate portability of the device if so desired. Also, all introductory and functional statements of intended use have been considered and deemed not to impose any structure on the claims distinguishable over the Barclay device which is further capable of dispensing hydrogen if one would desire.

7. In Re claims 4-8, 13, and 14, the Barclay reference discloses a gas handling system, but doesn't disclose a burst pressure of at least 12000 psi (claim 4) or 22500

psi (claim 13), a storage capacity of at least 3,500 grams (claim 5) or 7500 grams (claim 7) or 35 grams (claim 14), and a gross loaded weight of less than 4000 lbs (claim 6) or 5500 lbs (claim 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Barclay device to have (if not already) a burst pressure of at least 12000 psi (claim 4) or 22500 psi (claim 13), a storage capacity of at least 3,500 grams (claim 5) or 7500 grams (claim 7) or 35 grams (claim 14), and a gross loaded weight of less than 4000 lbs (claim 6) or 5500 lbs (claim 8), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art, *In re Aller*, 105 USPQ 233.

8. In Re claims 20-22 and 25, the Barclay reference discloses a gas handling system, but doesn't disclose a source of inert purge gas. Examiner takes Official Notice that the use of purge gasses is widely known in the fluid handling art for the purposes of purging fluid lines and to include a source of purge gas with the Barclay device would have been obvious to one of ordinary skill in the art at the time the invention was made in view of Examiner's Noticed fact.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barclay in view of Chen et al. in further view of Teel as applied to claim 1 above in further view of Mayer (US Patent 3,893,790) in further view of Kubo et al. (US Patent 5,624,236)

10. The Barclay reference discloses a refueling system (supra), but doesn't disclose the compressor means being an oil-cooled intensifier type of compressor. Mayer discloses an intensifier device (title) capable of providing a constant pressure (abstract).

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Furthermore Kubo discloses an oil cooled air compressor (title). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an intensifier as the compressor means, in order to provide gas at a constant pressure to the storage tanks furthermore it would have been obvious to one of ordinary skill in the art at the time the invention was made to cool said intensifier with oil, in order to quickly dissipate the heat said intensifier generates during operation.

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barclay in view of Chen et al. in further view of Teel as applied to claim 1 above in further view of McCarthy, Jr. (US Patent 6,623,160 B2)

12. The Barclay reference discloses a refueling system (supra) but doesn't disclose the use of a closed loop cooler as the cooling means. McCarthy, Jr. discloses a closed loop cooling system for cooling a heat generating component (title). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a closed loop cooler as the cooling means, in order to efficiently reduce the temperature of the hydrogen gas.

Double Patenting

13. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

14. Claim 16 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1 of prior U.S. Patent No. 6,755,225, B1. This is a double patenting rejection.

15. Claim 17 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 2 of prior U.S. Patent No. 6,755,225, B1. This is a double patenting rejection.

16. Claim 18 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 3 of prior U.S. Patent No. 6,755,225, B1. This is a double patenting rejection.

17. Claim 23 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 5 of prior U.S. Patent No. 6,755,225, B1. This is a double patenting rejection.

18. Claim 24 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 7 of prior U.S. Patent No. 6,755,225, B1. This is a double patenting rejection.

19. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

20. Claims 1 and 11 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,755,225 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 and 11 in the instant application disclose a more general embodiment of the same invention as claim 1 in the Patent. For example claim 1 of the patent discloses all limitations of claims 1 and 11 of the instant application and further discloses a hydrogen producing subsystem.

21. Claims 10 and 12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 6,755,225 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 10 and 12 in the instant application disclose a more general embodiment of the same invention as claim 2 in the Patent. For example claim 2 of the patent discloses all limitations of claims 10 and 12 of the instant application and further discloses a hydrogen producing subsystem.

22. Claim 2 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,755,225 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 in the patent discloses a compressor means which by definition includes a compressor.

23. Claims 9 and 15 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,755,225 B1. Although the conflicting claims are not identical, they are not patentably distinct from

each other because claim 1 in the patent discloses a cooling means. The examiner notes that said cooling means by definition includes a cooler.

24. Claims 20, 21, 22 and 25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 5 of U.S. Patent No. 6,755,225 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 20, 21, 22 and 25 in the instant application disclose a more general embodiment of the same invention as claim 5 in the Patent. For example claim 5 of the patent discloses all limitations of claims 20, 21, 22, and 25 of the instant application and further discloses a hydrogen producing subsystem.

25. Claims 4-8, 13 and 14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,755,225 B1 as applied to claims 1 and 11 of the instant application. Although the conflicting claims are not identical, they are not patentably distinct from each other because: claim one of the Patent discloses a gas handling system, but doesn't disclose a burst pressure of at least 12000 psi (claim 4) or 22500 psi (claim 13), a storage capacity of at least 3,500 grams (claim 5) or 7500 grams (claim 7) or 35 grams (claim 14), and a gross loaded weight of less than 4000 lbs (claim 6) or 5500 lbs (claim 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Patent device to have (if not already) a burst pressure of at least 12000 psi (claim 4) or 22500 psi (claim 13), a storage capacity of at least 3,500 grams (claim 5) or 7500 grams (claim 7) or 35 grams (claim 14), and a gross loaded weight of less than 4000 lbs (claim 6) or 5500 lbs (claim 8), since it has been held that where the general conditions

of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art, *In re Aller*, 105 USPQ 233.

26. Claim 3 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,755,225 B1 as applied to claim 1 of the instant application in view of Mayer (US Patent 3,893,790) in further view of Kubo et al. (US Patent 5,624,236). Patent 6,755,225 B1 discloses all the limitations of claim 3 but doesn't disclose the use of an oil-cooled intensifier as the compressor means. Mayer discloses an intensifier device (title) capable of providing a constant pressure (abstract). Furthermore Kubo discloses an oil cooled air compressor (title). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an intensifier as the compressor means, in order to provide gas at a constant pressure to the storage tanks furthermore it would have been obvious to one of ordinary skill in the art at the time the invention was made to cool said intensifier with oil, in order to quickly dissipate the heat said intensifier generates during operation.

27. Claim 19 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,755,225 B1 as applied to claim 1 of the instant application in view of McCarthy, Jr. (US Patent 6,623,160 B2). Patent 6,755,225 B1 discloses all the limitations of claim 19 but doesn't disclose the use of a closed loop cooler as the cooling means. McCarthy, Jr. discloses a closed loop cooling system for cooling a heat generating component (title). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was

made to use a closed loop cooler as the cooling means, in order to efficiently reduce the temperature of the hydrogen gas.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Searle (US Patent 4,714,411) discloses a pressure intensifier device, and Storbeck et al. (US Patent 5,390,502) discloses a closed loop cooling system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON K. NIESZ whose telephone number is (571)270-3920. The examiner can normally be reached on mon-fri 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Nguyen can be reached on (571) 272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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